



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Water Use Advisory Council

August 18, 2020

1. Welcome

WUAC Meeting Materials and Access Information

https://www.michigan.gov/egle/0,9429,7-135-3313_3684_64633-533279-,00.html

WUAC Co-Chairs

- Laura Campbell, Manager (Items 1-5)
Agricultural Ecology Department
Michigan Farm Bureau
- Brian Eggers, Principal and Founder (Items 6-9)
AKT Peerless Environmental
- Bryan Burroughs, Executive Director (Items 10-14)
Michigan Trout Unlimited

Co-Chair Laura Campbell

Agenda Items 1-5

2. Roll Call

3. Approval of Agenda –Roll Call Vote

4. Approval of Minutes—Roll Call Vote

Water Use Advisory Council (WUAC) Meeting

Tuesday, August 18, 2020

1:00 p.m.-3:00 p.m.

On Teams Hosted by the Department of Environment, Great Lakes, and Energy (EGLE)

AGENDA

1. Welcome
2. Roll Call
3. Approval of Agenda-Roll Call Vote
4. Approval of Minutes-Roll Call Vote
5. Public Comment
6. Program Staff Update --Jim Milne
7. Update on Depleted Water Management Areas—Jim Milne
8. Cass County Study Summary
 - a. Presentation by Todd Feenstra
 - b. EGLE/USGS Comments
 - c. Models Committee Next Steps
9. Process and Timeline for Completing 2020 Legislative Report—Christine Spitzley
10. Updates
 - Data Collection Committee
 - Implementation Strategies Committee
 - Models Committee
 - New Topics Committee
11. Next Meeting September 15, 2020
12. Open comments
13. Next meeting
14. Motion to Adjourn

5. Public Comment

Co-Chair Brian Eggers

Agenda Items 6-9



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

6. Agency Update

Water Use Advisory Council

August 18, 2020

Outline

- DTMB server issues affecting WWAT
- 327 permit application changes
- Annual Part 327 Legislative Report
- Water Use Program Metrics for Program Year 11
- Cumulative Statistics Program Years 1-11

Part 327 Permits

- Construction dewatering project stakeholder group
- Changes to permit application template
- Changes to permit template
- Outreach activities

Part 327 Legislative Report

- Zone C site-specific review (SSR) requests= 49
- SSRs changed from Zones C to B= 8
- SSRs changed from Zones C to A = 7
- Zone C SSRs denied (Zone D) = 0
- SSRs completed > 10 business days = 56
- Zone A WWAT registrations = 31
- Zone B WWAT registrations = 31
- Voluntary requests for SSRs = 0
- Total registrations (WWAT + SSR) = 426

Year 11 Program Metrics

- 0 Alternative analyses
- 154 SSRs submitted
- 56 SSR decisions not made ≤ 10 days
- 13 total SSRs still pending
- 63% of SSR decisions made ≤ 10 days
- Average days to SSR decision 11

Year 11 Compliance Metrics

Compliance Communications:

Amended registrations 654

After the fact registrations 173

Missing pump information 188

First Violation Notices 29

Second Violation Notices 2

Violations Closed 14

Complaints Received 11

Public Water Supply Pre-Screening Reviews

From July 9, 2019 to July 8, 2020:

- Passed: 14 Pre-screening requests
- Denied: 6 Pre-screening requests
- Retracted: 4 Pre-screening requests

Cumulative Statistics 2009-2020

SSR Status.*												
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Total
SSRs Received	53	87	160	340	262	150	157	181	173	191	154	1,908
SSRs Authorized in Program Year	42	71	136	259	184	104	123	128	89	130	126	1,392
SSRs Received but Authorized after end of Program Year	1	0	4	38	20	10	6	15	28	9	42	173
SSRs Denied**	2	2	4	4	2	6	10	13	3	4	7	57
Pending Compliance & Enforcement	0	0	0	0	0	3	0	0	0	2	7	12
SSRs Still Pending	0	0	0	0	0	1	0	2	24	19	13	NA

* Applicants occasionally cancel SSR requests for a variety of reasons, including mistaken submittal or in lieu of receiving an SSR denial. This typically occurs before a determination is made but occasionally takes place after an SSR is authorized. This accounts for the discrepancy between SSRs Received in a particular year versus the numbers authorized, denied, or pending.

** Determination may have been made and communicated to applicant in a later program year.

Cumulative Statistics 2009-2020

Large Quantity Withdrawal Registrations.												
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
LQWs Authorized Through	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Total
WWAT	172	308	377	680	352	249	227	266	206	250	300	3,387
SSR	43	71	140	297	204	114	129	143	117	139	126	1,523
Totals	215	379	517	977	556	363	356	409	323	389	426	4,910
Average Time to Process SSRs.												
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	
Business Days from Receipt of SSR Request	11	14	11	46	51	26	18	35	60	46	11	
SSR Timeliness (Percent)												
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
Business Days	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	
10	86	34	81	67	32	27	45	22	17	21	63	

Questions?

Jim Milne
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ENVIRONMENT, GREAT LAKES, AND ENERGY

7. Depleted Water Management Areas Update

Water Use Advisory Council

August 18, 2020

Outline

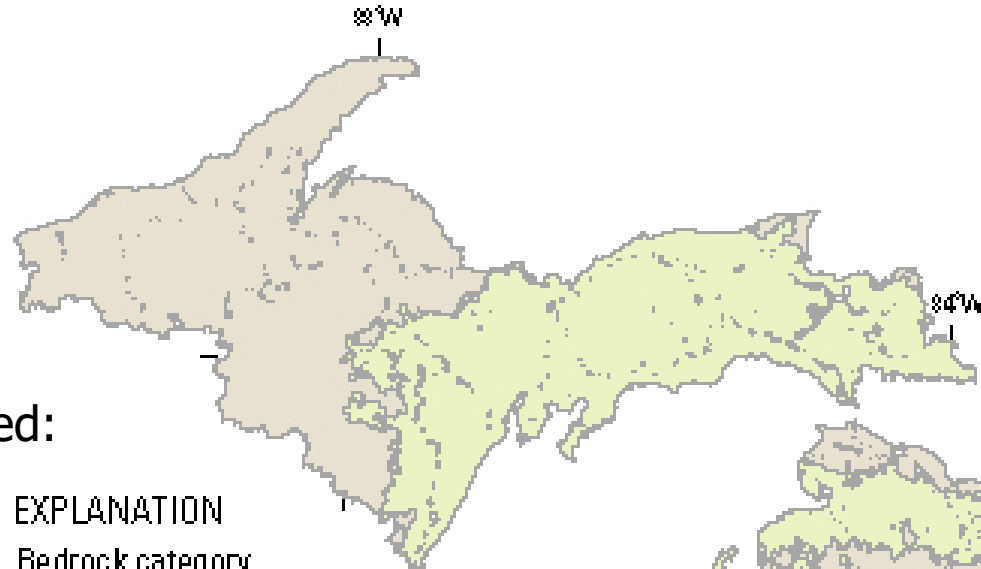
- Cumulative stream flow depletion tracking
- Why are these WMAs in Zone D?
- Map of depleted Water Management Areas
- Table of depleted Water Management Areas
- Next steps
- Discussion

Cumulative Stream Flow Depletion Tracking

- Database tracks cumulative stream flow depletions by Water Management Area
- Includes WWAT, SSRs, alternative analyses, & permits
- Deposits from expired and canceled registrations
- Deposits from replacement of existing withdrawals





Why Are These WMAs in Zone D?

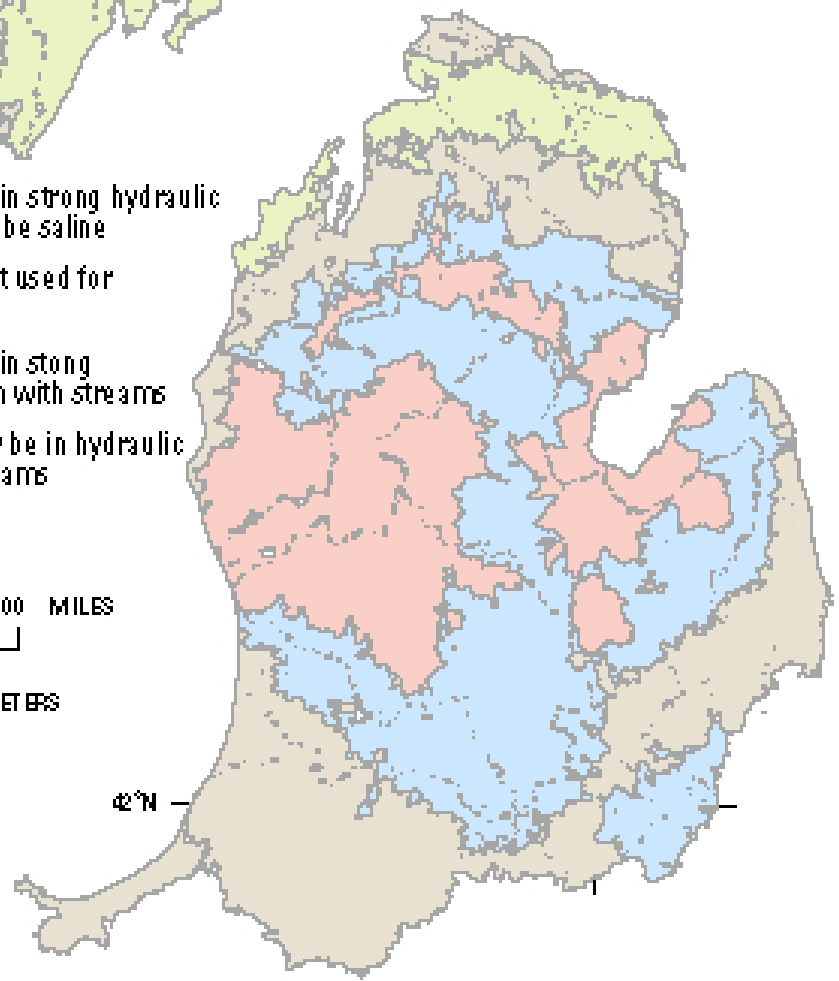
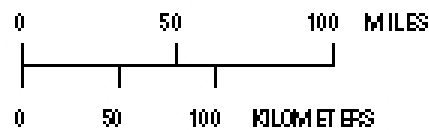
- Bedrock Auto-pass Authorizations
- Part 327 Violations
- Pending SSR Requests
- Pending Public Water Supply Pre-screening Reviews
- Other causes



How bedrock is handled:

- Bedrock pass
- Glacial calc only
- Bedrock pass
- Same as Glacial calc

EXPLANATION	
Bedrock category	
	-1 Bedrock aquifer not in strong hydraulic connection but may be saline
	0 Bedrock typically not used for high-capacity wells
	1 Bedrock aquifer not in strong hydraulic connection with streams
	2 Bedrock aquifer may be in hydraulic connection with streams

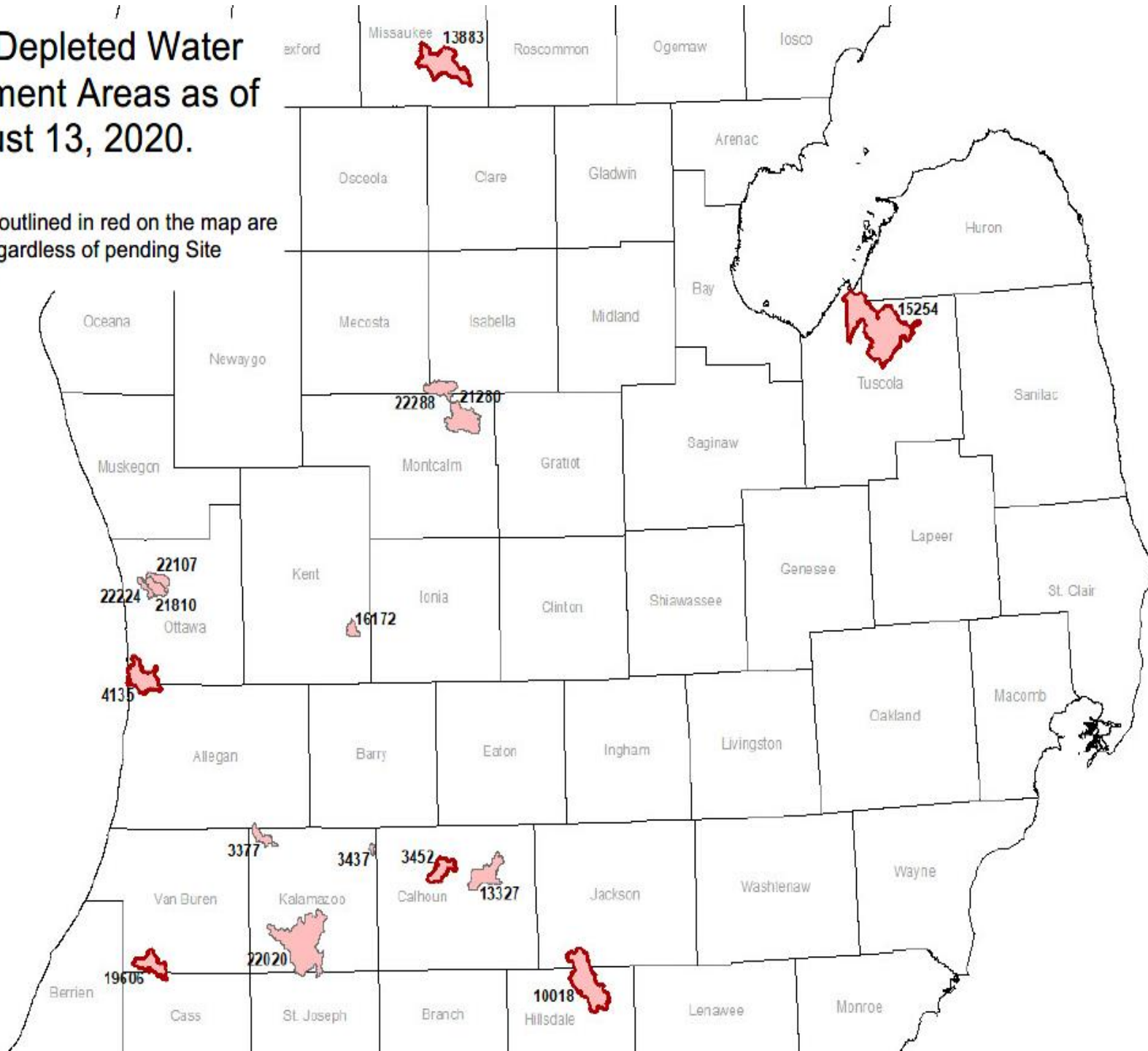


Part 327 Violations

- Unregistered LQWs
- Pumping More Than Authorized
- Installed Differently Than Authorized

Map of Depleted Water Management Areas as of August 13, 2020.

WMAs which are outlined in red on the map are in the negative regardless of pending Site Specific Reviews.



Depleted Watersheds as of 8/13/2020								
Name	Number	County	Type	Index Flow (gpm)	Current Depletions	Depletions by SSRs	Depletions without SSRs	Comments/Next Steps
South Branch Kalamazoo River	10018	Hillsdale/Jackson	Cool Stream	1,930	-371		-371	The tool previously gave bedrock auto pass to wells that are not confined; we will be visiting this area in the summer/spring to verify if/how these wells are affecting the WMA.
	3377	Kalamazoo/Allegan	Cold Stream	3,007	-155	156	1	3 pending SSRs (6158-20206-30, 6159-20206-34, and 6160-20206-21), owner has been denied SSRs in this WMA before, IFR came back higher than previously, requesting a perennial vs. non-perennial stream determination.
Dickinson Creek (USGS Station #: 041035285)	3452	Calhoun	Cold transitional stream	898	-146	88	-58	The tool previously gave bedrock auto pass to wells that are not confined; a gauge has been installed to monitor the WMA. Two SSRs have recently been requested by a new property owner for previously unregistered wells (6151-201206-51 and 6152-202006-38), they will be submitting workplans. Additionally, this WMA contains an unregistered irrigation well on tribal land, which is depleting the WMA 8gpm, which is not currently accounted for.
	21810	Ottawa	Cold transitional stream	897	-125	140	15	Pending a package of SSRs in this WMA; waiting for owners to make decision regarding adjusting baseline capacity to authorize proposed withdrawals &/or to collect additional data.
Osborn Drain (USGS Station #: 041015313)	19606	Van Buren/Cass	Cold transitional stream	1,571	-102	64	-38	Pending a package of SSRs which were submitted in response to a violation notice.using CCS data will increase depletions If the data from the Cass County Study is applied to the wells in this WMA the WMA will be depleted even more.
Macatwa River	4135	Ottawa/Allegan	Warm Small River	5,386	-99	29	-70	SSR for temporary dewatering project ending in August 2020 (debiting 29 gpm), compliance issues for one farm, and index flow review came back lower than expected. Working with owner/pump installer of the compliance issue to verify the capacities of the pumps installed in horizontal wells.
	22020	Kalamazoo/St. Joseph	Warm Stream	15,260	-91	95	4	Pending SSR 6232-20208-55, which is for a partial baseline replacement .
	22107	Ottawa	Cold transitional stream	808	-88	90	2	Pending a package of SSRs in this WMA; waiting for owners to make decision regarding adjusting baseline capacity to authorize proposed withdrawals &/or to collect additional data.
Skunk Creek	22288	Isabella/Mecosta/Montcalm	Cold transitional stream	2,513	-79	89	10	Pending SSR 5879-201912-11; on hold until results from the Skunk Creek Study from USGS are finalized.
Wiscoggin Drain	15254	Tuscola	Warm Stream	0	-62		-62	WMA under influence of high Great Lake water levels. Index flow found to be 0 cfs. Prior to index flow review, two registrations were auto-passed by the WWAT. Waiting on owner to verify that wells were installed.
Rice Creek (USGS Station #: 04103490)	13327	Calhoun	Cold Transitional Small River	21,095	-49	58	9	Pending SSR 5803-20199-43 and a compliance issue.
	3437	Kalamazoo	Cold Transitional Stream	583	-45	46	1	Pending 6188-20207-10; will not pass as requested. Discussing with driller and owner other possible options.
Butterfield Creek	13883	Missaukee	Cold transitional stream	6,732	-17		-17	A deposit associated with an Oct-July was made back in 2013, which turned out to be made in error; error was corrected in 2015 and the WMA has been in the negative since.
	16172	Kent	Cold transitional stream	601	-16	40	24	Pending SSRs 6017-20203-32 and 6018-20203-45, which are for public water supply.
	22224	Ottawa	Cold transitional stream	898	-11	14	3	Pending a package of SSRs in this WMA; waiting for owners to make decision regarding adjusting baseline capacity to authorize proposed withdrawals &/or to collect additional data.
Wolf Creek (USGS Station #: 04154612)	21280	Montcalm	Cold transitional stream	4,937	-8	9	1	Denial letter sent for SSR 6143-20205-36; deadline for owner's response is 8/12/2020.

WMAs that are impacted by the Bedrock Auto Pass Engagement

WMAs that are impacted by open Violations

WMAs in red text are depleted regardless of SSR status

Questions?

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Cass County Summary Study

- a. Presentation by Todd Feenstra
- b. EGLE/USGS Comments
- c. Models Committee Next Steps

Cass County Summary Study

a. Presentation by Todd Feenstra



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

b. EGLE's & USGS' Comments on Cass County Pilot Study

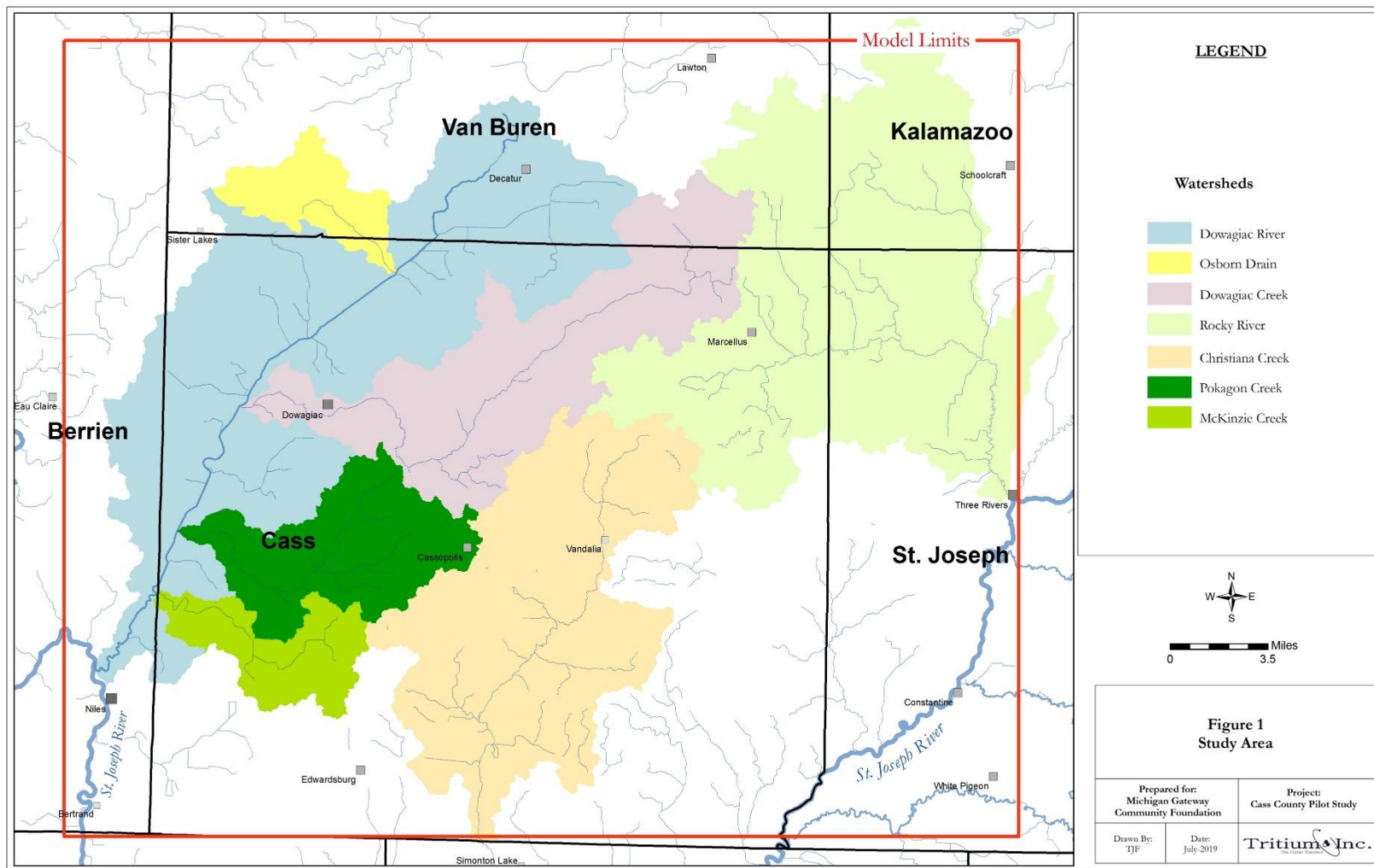
Water Use Advisory Council

August 18, 2020

Study Purposes

(August 2016 Work Plan)

1. Collect hydrogeologic data to be used in the SSR process.
2. Create groundwater models for use in the SSR process.
3. Evaluation of field methods, analyses, and modeling for technology transfer to other areas in the State.



Purpose 1 Accomplished

- Groundwater elevation data
- Aquifer pumping test data
- Stream flow data
- Stream stage data
- Streambed conductance data

Problems with Groundwater Models

- Identified by USGS' & EGLE WRD's model reviews
- Models don't use same stream layers as WWAT, SSR, alternative analyses, & Part 327 permit reviews
 - Some management units are not given a stream segment
 - Distance between a proposed well & nearest stream is a crucial term in the Hunt 1999, Hunt 2003, & Ward & Lough 2011 models
- Flooded model cells
- Models poorly calibrated
- The contractor's October 15, 2019 response didn't substantively address comments

Final Cass County Model Stream Comparison Showing Streams Included in the Model (Diagram A) and WWAT Streams and Watersheds (Diagram B)

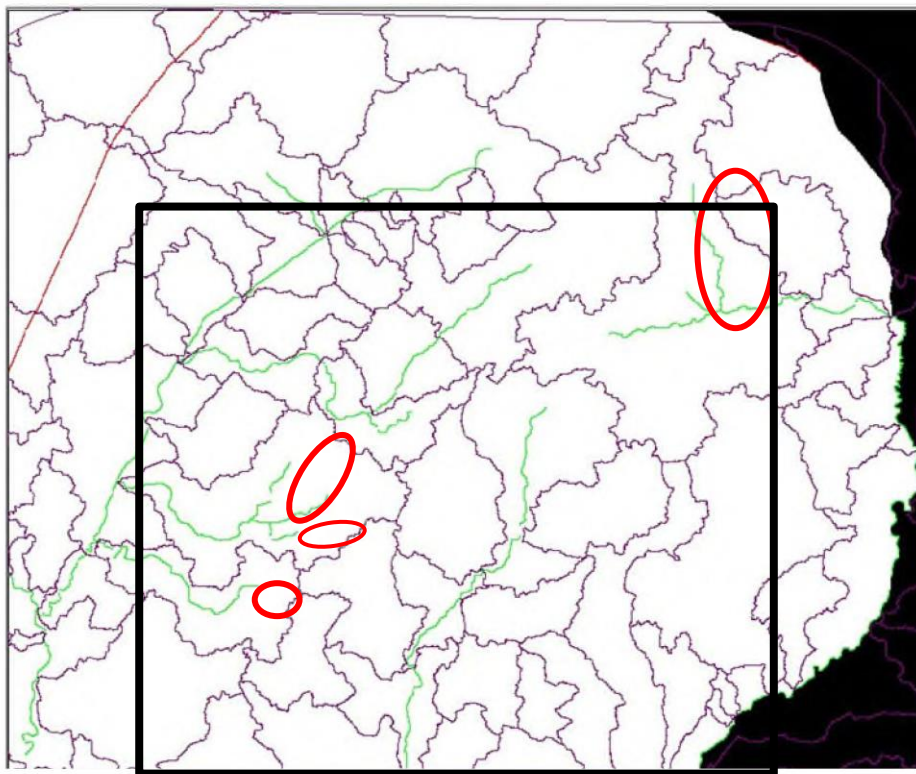


Diagram A. Final Groundwater Vistas Model showing additional streams included in the model with WWAT watersheds added for comparison

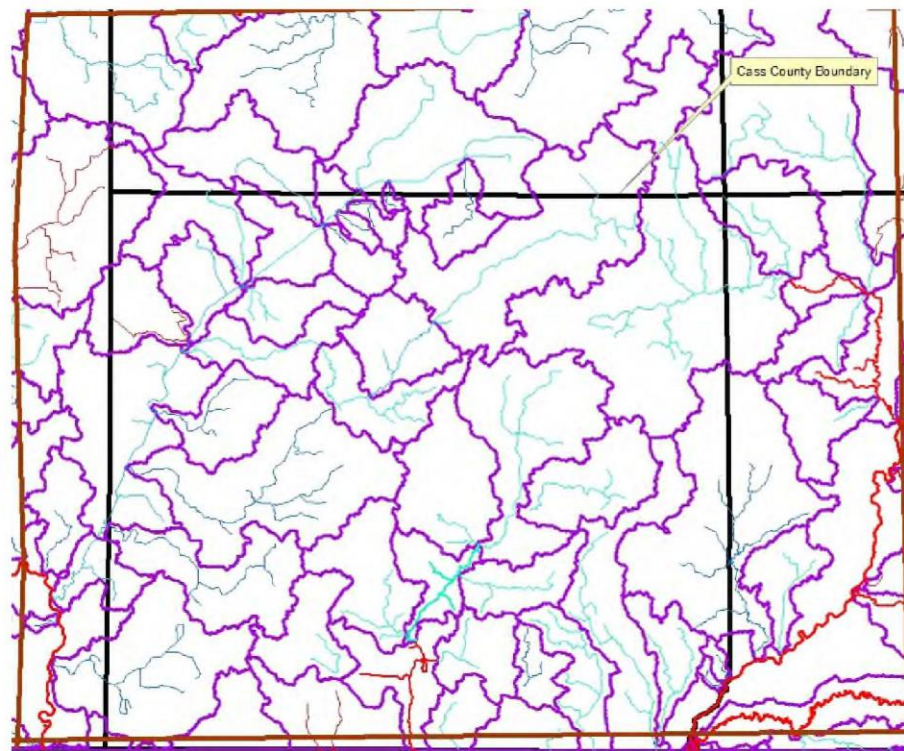


Diagram B. ArcGIS map showing WWAT model streams and watersheds

Distance Between Well & Stream

- The distance from a proposed well to the nearest stream segment is a common term in the Hunt 1999, Hunt 2003, and Ward & Lough 2011 groundwater models
- The missing stream segments in the Cass County model can lead to underestimation of stream flow depletion because the distance between the well and the nearest stream is too large
- The missing stream segments in the Cass County model can lead to overestimation of stream flow depletion at a nearby included stream because other adjacent stream segments are not included in the model

Comparison of Mapped Surface Water Features in the Cass County Area with the Cass County Groundwater Model

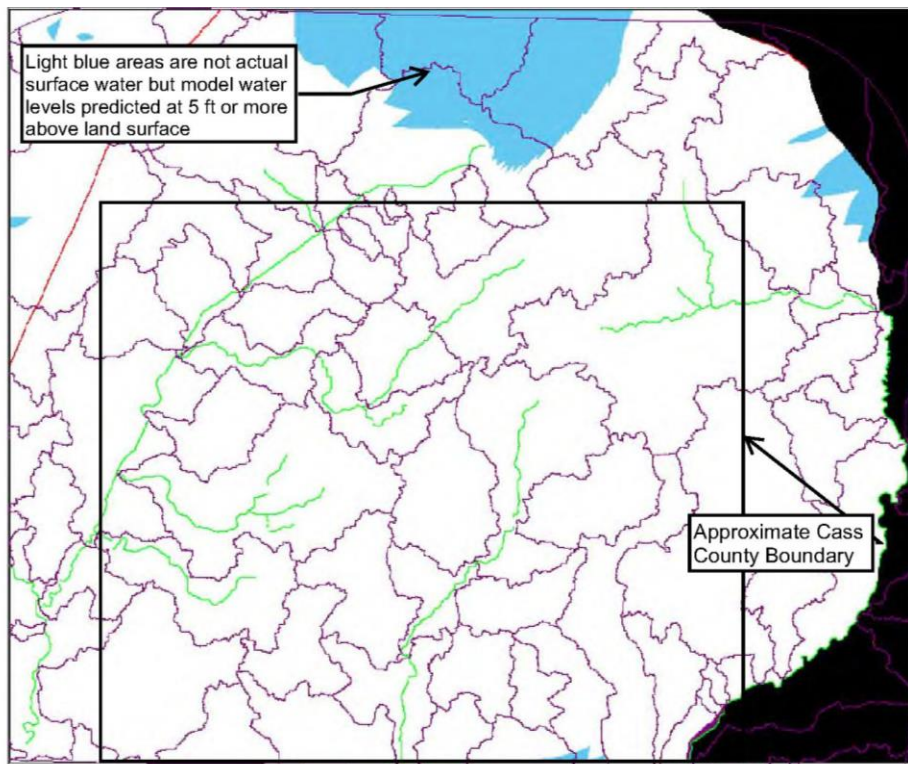


Diagram A. Final Groundwater Vistas Model streams and WWAT watersheds

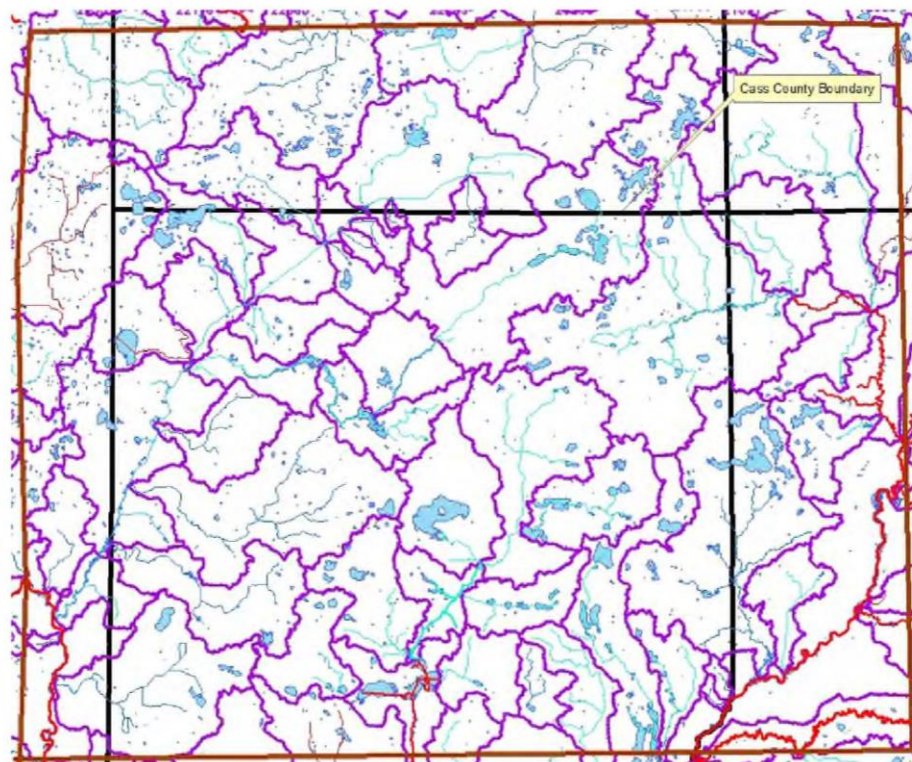
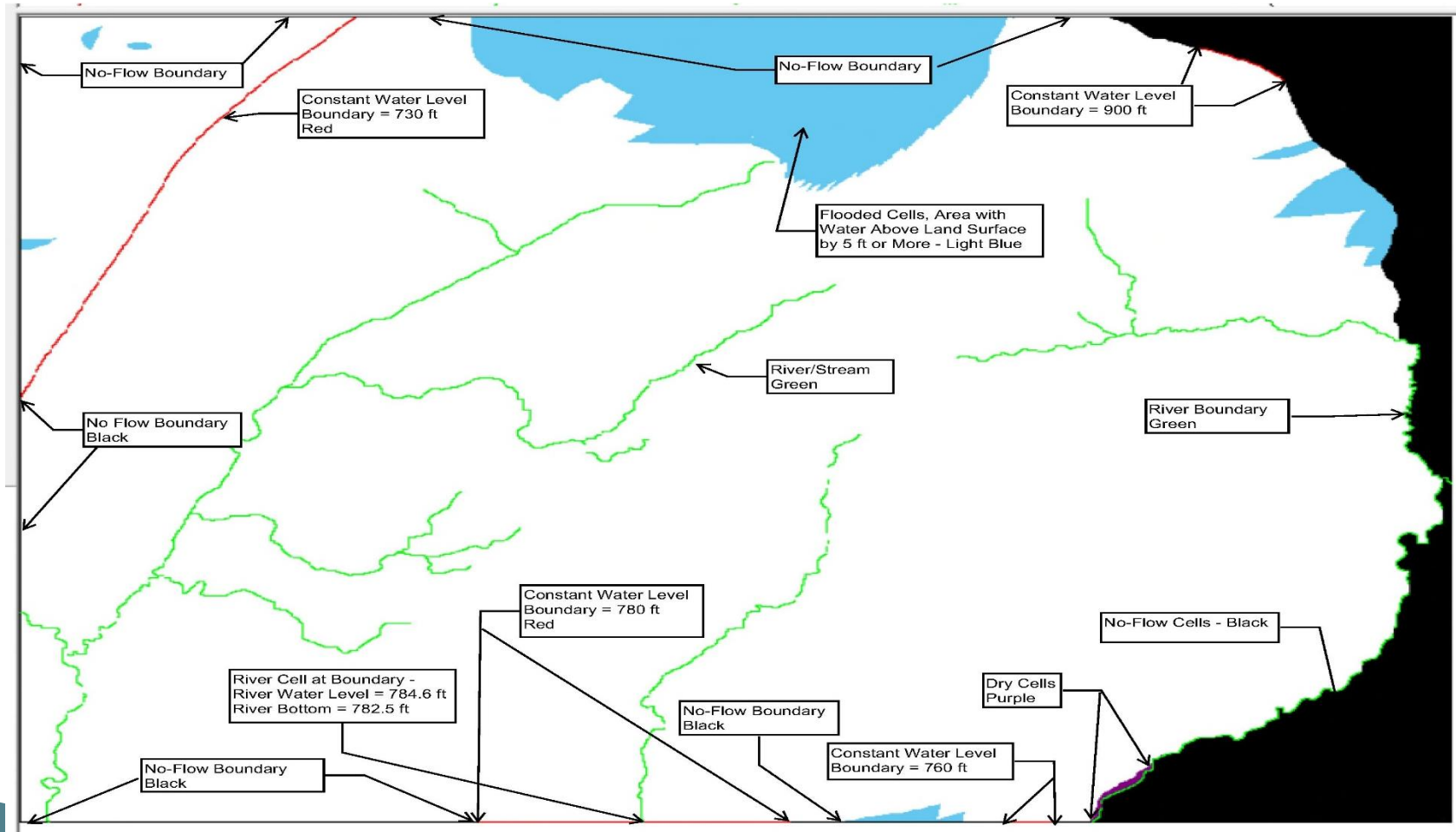
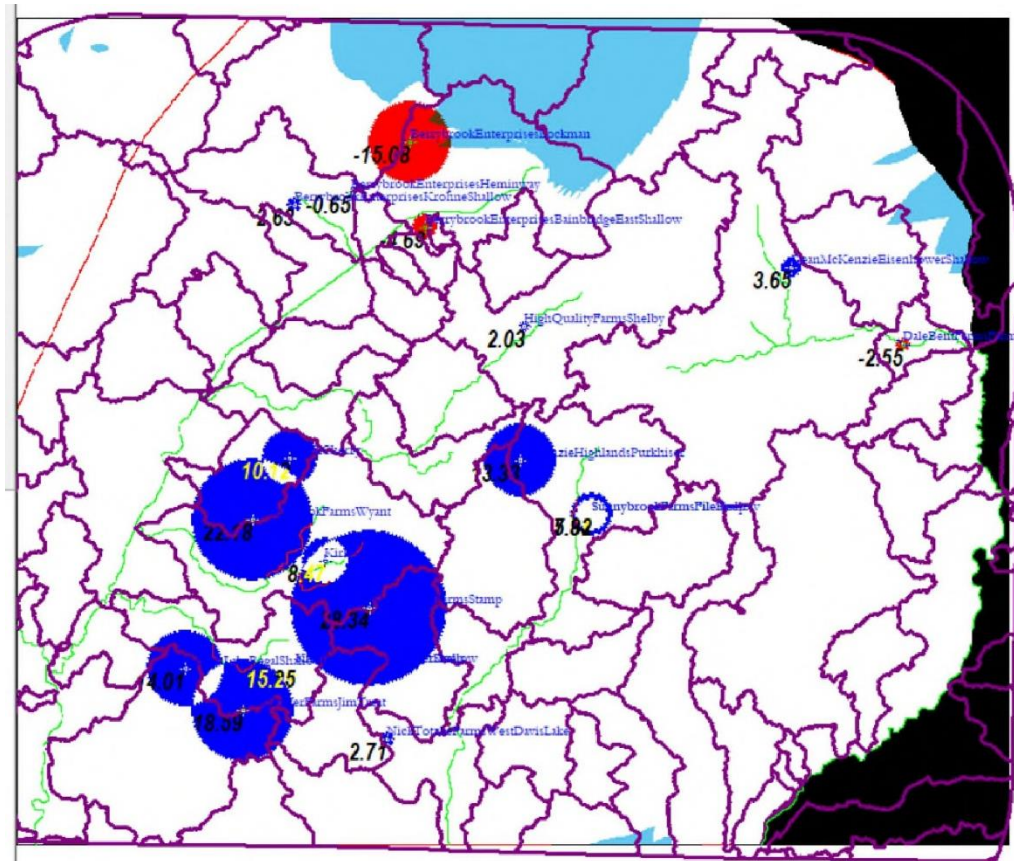





Diagram B. ArcGIS map of surface water bodies, WWAT model streams and watersheds

Cass County Final Groundwater Model Boundary Conditions Defined for All Five Layers of the Model

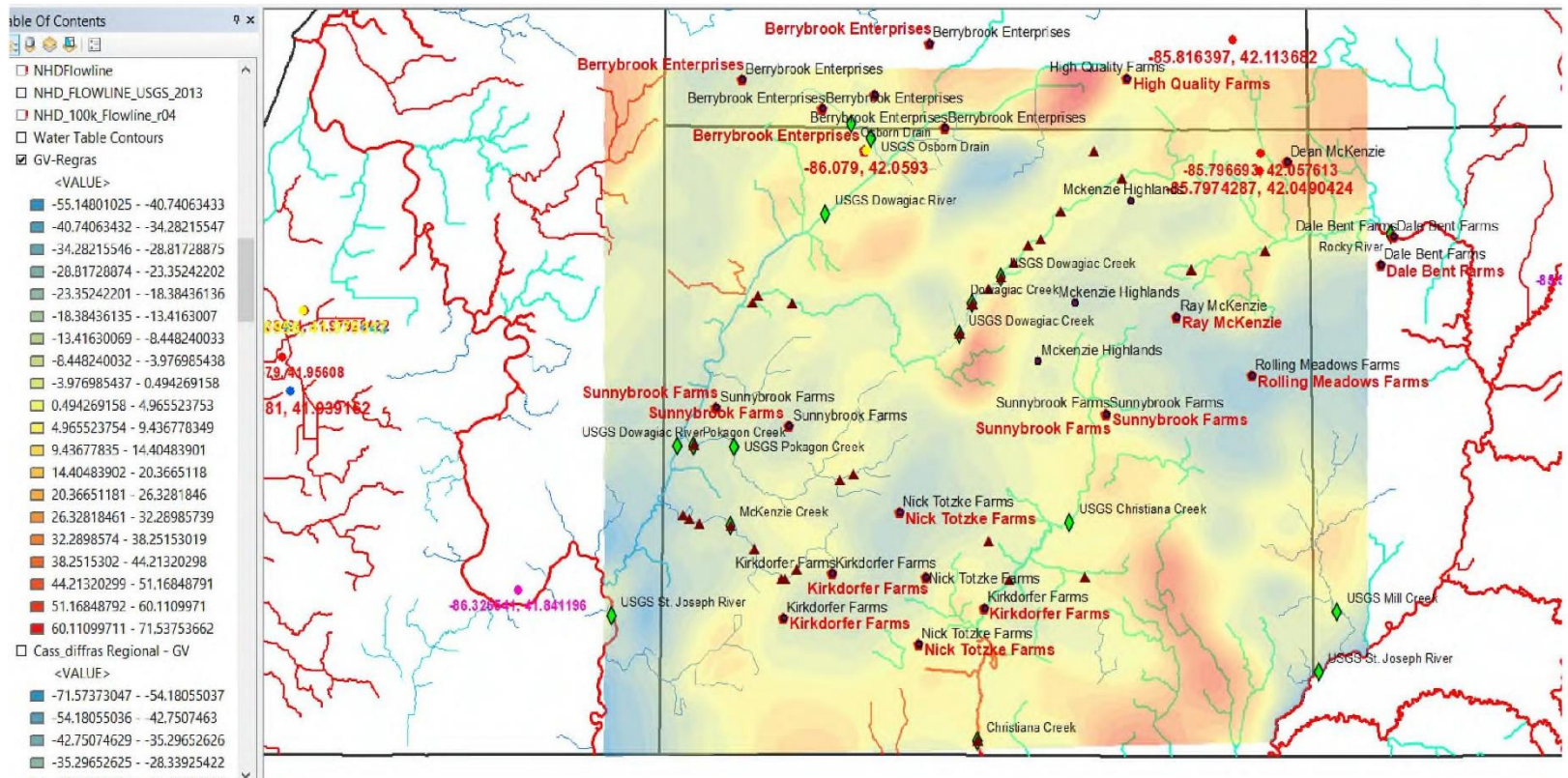


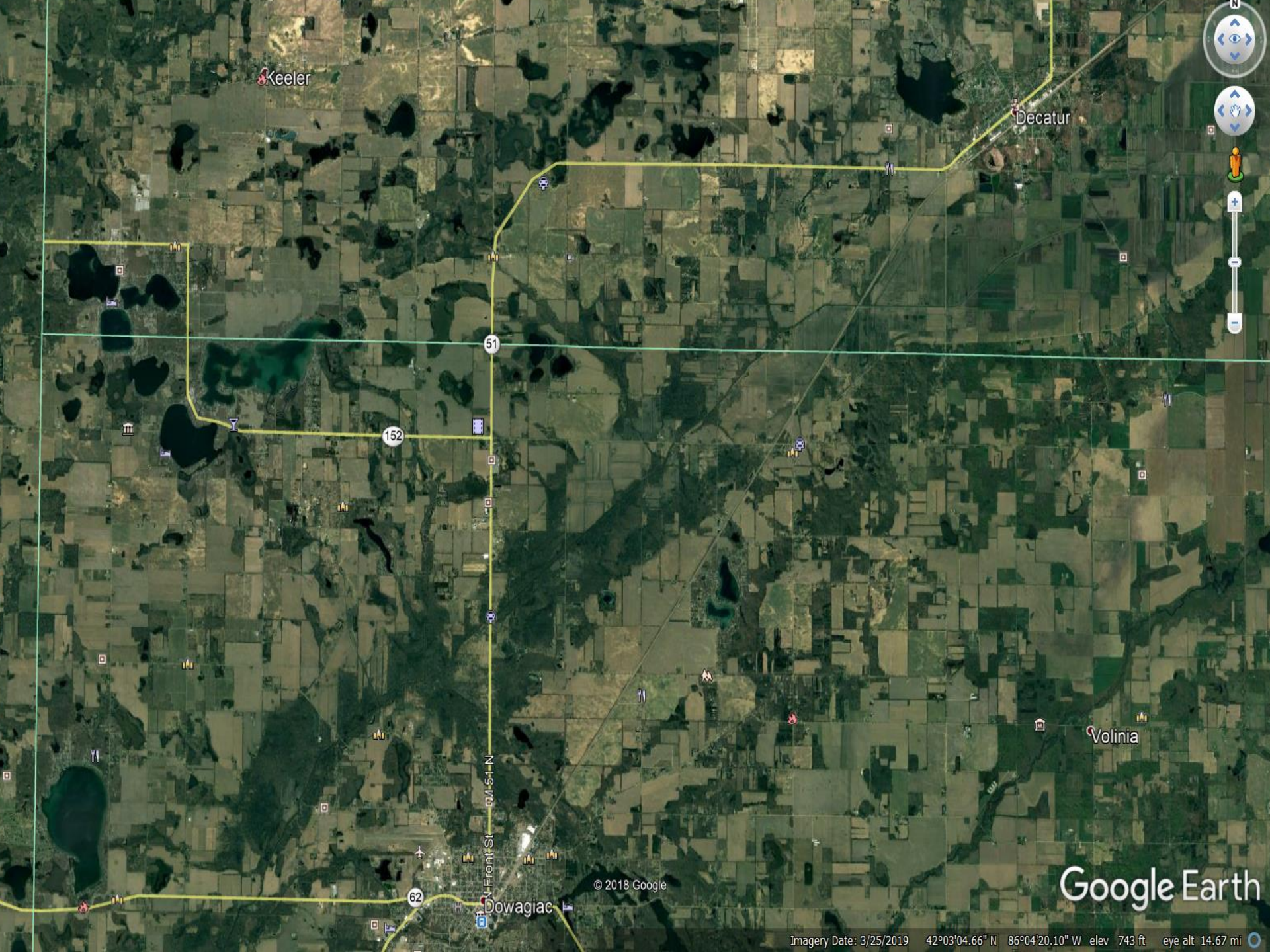
Final Groundwater Model Residuals Between the Target Data and the Model Prediction Layer 1



-  Red = Negative groundwater residuals indicate that the model is calculating water levels higher than the measured site values
-  Blue = Positive groundwater residuals indicate that the model is calculating water levels lower than the measured site values
-  Light Blue Areas = Model is calculating groundwater levels above land surface by 5 feet or more up to > 90 ft

Cass County Model Water Levels minus Updated Cass County Water Levels





Keeler

Decatur

Volinia

Dowagiac

51

152

62

N Front St 191-51-N

© 2018 Google

Google Earth

Imagery Date: 3/25/2019 42°03'04.66" N 86°04'20.10" W elev 743 ft eye alt 14.67 mi

CONTRACTOR'S RESPONSE TO MODEL REVIEWS

- Budget cuts limited the scope of the model to 5 WMAs specified
- Many of the missing stream segments in those 5 WMAs are non-perennial or are marsh/wetlands/lakes
- Adding the remaining missing segments & rerunning the model caused < 0.25% change in estimated streamflow depletions
- Flooded & dry cells don't matter because of their distance to the WMAs
- Statistical analysis shows the model is well calibrated

Purpose 2 Not Accomplished

- The Cass County models can't be used in place of the WWAT or for SSRs, alternative analyses, or Part 327 permit reviews.
- In the future, if the Cass County models are properly redesigned and calibrated, they may serve as a framework for nesting smaller sub-watershed or project specific models.

Purpose 3 Accomplished

- Comparison of mud rotary and hollow-stem auger drilling
- Evaluation of using irrigation wells and center-pivot irrigation systems for aquifer pumping tests
- Compared multiple methods of collecting streambed conductance data
- Compared multiple methods of collecting stream flow measurements

Conclusions

- Geology, groundwater, stream flow, and streambed conductance data will be used in future SSR, alternative analysis, and Part 327 permit application reviews
- The stream flow data can be incorporated into future stream index flow reviews
- The groundwater models aren't usable for the Water Use Program in place of the WWAT's groundwater model
- The comparisons of various data collection methods are useful for state and federal agencies, property owners, consultants, and other interested parties planning future data collection activities
- The Cass County Pilot Study is not a study "accepted by the department" as discussed in MCL 324.32706c (1)(a)(i)

Next Steps?

- Redesign & recalibrate the groundwater model(s)
- The modeler should review EGLE's & USGS' model review comments
- The modeler should consult with EGLE & USGS modelers throughout the development and calibration of the conceptual and numerical models
- USGS installed stream gages in the Dowagiac Creek & Osborn Drain WMAs
- Other ideas?

Options for Next Steps?

Option A: Data is incorporated into current system and made available for use as needed. No further model development.

Option B: Data is incorporated into current system and made available for use as needed. A new groundwater model is developed and calibrated with the information that could be used in the current platform.

Option C: The data is not used, and no further development of the model is pursued.

Option D: Other ideas?

Sideboards for consideration:

- Funding for the model development is not currently available in state government and would need to be pursued either through budgeting processes or through a granting entity.
- Any new modeling efforts should include a review of EGLE's & USGS' model review comments and the modeler should consult with EGLE & USGS modelers throughout the development and calibration of the conceptual and numerical models.

Questions?

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Cass County Summary Study

c. Models Committee Next Steps

9. Legislative Report Process

Christine Spitzley, Principal
OHM Advisors

Goals of December 2020 Report

- More concise
- Easy to understand
- Highlight achievements
- Limited recommendations
- Implementation strategy
- Digital format only
- Goal is to present one clear voice to the Legislature

2020 Legislative Report

- Recommendations will be sorted by topic/data v. Committee
- Committees will not be identified in the report
- First of ongoing series of prioritizations
- Each Committee is asked to provide 3-5 recommendations
- Specific items with budget/costs attached
- Implementation Committee will prioritize recommendations

Recommendation Format

- Recommendation Title/Name
- Synopsis clearly explaining issue, impact and anticipated outcomes
- Recommendation Actions
- Implementing Organization
- Cost Analysis and Funding Recommendation
- Legislative changes if applicable
- Timeframe

Next Steps



Questions/Information

Christine.Spitzley@ohm-advisors.com

517.525.1808

Co-Chair Bryan Burroughs

Agenda Items 10-14

10. Committee Updates

DATA Committee Update

Co-Chair Bryan Burroughs, Ph.D.
Executive Director
Michigan Trout Unlimited

Data Committee Update

WUAC - August 18, 2020

- Next meeting – tomorrow, 3-5pm, via Zoom
- Will be organizing to complete “recommendations” and report drafts
- Will come to WUAC September mtg with recommendations proposals
- Did not end up being able to bring all intended topics to full and complete level of discussions and planning as ideally hoped.
- General summary
 - Did discuss all previous recommendations to identify what's been done, and what is needed to complete each.
 - Did not reach full detail implementation plans for everything
 - Will be accounting for what has been done, what needs to be done, how it needs to be done, and general approaches needed to get things done.

Data Committee Update

- What you can anticipate us presenting to you next month
 - Vision, need, benefits and initial cost to move forward with an integrated state water management database framework.
 - Identification of need for new streamflow, geology and groundwater data acquisition, recognizing critical high use areas and statewide gaps, including a realistic budget need to begin addressing this in the short term (discussion of long-term need).
 - Budget needs for continuation of well driller trainings (MGS & EGLE)
 - Status report and identification of needs to fully finish implementing recommendations concerning standards, protocols and use of data submitted for the program. Future work to be completed by the committee.
 - Summary and discussion of the status of implementing Inland Lake ARI recommendations in the future. Future work by the committee.
- First 3 will have budget request needs, last 2 will not at this time. None of these represent “new” issues or “new” recommendations but are follow up from previously adopted recommendations.

Implementation Strategies Committee Update

Co-Chair Douglas E. Needham, P.E.
President
Michigan Aggregates Association

Implementation Recommendations

- Implementation Recommendations:
- Improve communication between Wellogic and WWAT
 - Training and standardization of drillers' input
 - Make WWAT registration number required for Wellogic or develop common identifier between these systems
 - Automating the as-built compliance for wells
- Data Use, Standards, Protocols
 - Develop programs and publish protocols for groundwater, geologic, streamflow data collection
- Modeling using improved data
 - Continue improving criteria for groundwater flow models
 - Michigan Hydrologic Framework

Implementation Committee

- Will work to coordinate priorities of other WUAC Committees for consistency
- To complete and coordinate recommendations in report draft, recommendations should include:
 - Problem statement
 - Steps needed to achieve task
 - Desired outcome
 - Estimate of cost

Models Committee Update

David A. Hamilton
Senior Policy Director
Great Lakes Project
The Nature Conservancy in Michigan

New Topics Committee Update

- 1) Water User Groups
- 2) Water Conservation and Efficiency

New Topics Committee Update

1.) Water User Groups

Emily Finnell

2.) Water Conservation Workgroup Recap

Jeremiah Asher, Tom Frazier, Emily Finnell, Kelly Turner,
Abigail Eaton, Frank Ettawageshik, Jason Walther

Water Conservation Workgroup

Conduct an assessment

Compare Water Use Advisory Council recommendations and the MI Water Strategy recommendations ranking by effort and impact

Compile rankings into a matrix to highlight which recommendations should be prioritized

2 Recommendations rose to the top

WC1.2 (Michigan Water Strategy Goal 5, Recommendation 2)

WC 1.3 (Michigan Water Strategy Goal 5, Recommendation 4)

Water Use Advisory Council		MI Water Strategy		
Number	Recommendation	Link	Number	Recommendation
WC 1.2	Based on the water use trends, more focus needs to be placed on conservation and efficiency in the Irrigation Sector. MDARD has developed comprehensive guidance in the form of Generally Accepted Agricultural and Management Practices (GAAMPs), which includes guidance in preparing a water conservation and efficiency plan. MDARD and Michigan State University (MSU) Cooperative Extension should continue to provide and expand training and outreach to the Irrigation Sector to increase the use of these GAAMPs.	G5-2, G5-6	G5-2	Establish voluntary water efficiency targets for all major water sectors to reduce water use impacts and costs.
WC 1.3	The DEQ should incentivize water conservation and efficiency in the public sector by rewarding the implementation of water conservation and efficiency measures when applying for State funding for water infrastructure projects. This could be accomplished by providing significant points to project plans from water systems that already have a water conservation and efficiency plan, thereby increasing the likelihood that the project will be funded.	G5-2, G5-6	G5-3	Promote innovative technologies that reduce cost and water loss, or convert waste products to usable materials.

Additional Priority

WC 2.2 (Michigan Water Strategy Goal 5, Recommendation 6) and subsequent recommendations WC 2.2a-d, with emphasis on WC 2.2 b

Water Use Advisory Council		MI Water Strategy		
	Recommendation	Link		
Number			Number	Recommendation
WC 2.2	Michigan should revise its water conservation program to: 1) further inform and encourage water conservation, and 2) assess and document the nature and extent of water conservation practiced by large water users. This program should consist of the following components:	G5-7	G5-6	Define measures of agriculture water conservation and establish voluntary targets for utilizing best management practices (BMPs) that reflect conformance with the Irrigation Water Use Generally Accepted Agricultural and Management Practices in areas of existing or potential water stress.
WC 2.2a	Michigan should convene a multi-interest workgroup to identify existing and new opportunities to incentivize water conservation. This effort should target all water users and encourage conservation generally, the adoption of specific practices, and contribution to improved data collection.	G5-4 other recs	G5-7	Enhance voluntary water conservation measures through technology and outreach for agriculture to optimize water use while reducing impacts and costs.
WC 2.2b	Among the specific practices encouraged should be a water auditing program. For public supplies, the water audit should be in conformance with the American Water Works Association (AWWA), M36 Water Audits and Loss Control Programs. Water users should be encouraged to develop a water conservation program based on the results of the audit. While each water user is able to determine the nature and extent of its conservation program, incentives should specifically encourage a component on metrics for evaluating the performance of the program and reporting of results to the DEQ or MDARD. Providing information to employees or water customers on the water user's conservation programs and policies should also be encouraged.	G6-4, G6-6	G6-2	Utilize pricing and funding strategies to support infrastructure improvements while allowing for water conservation.
WC 2.2c	To facilitate the above set of activities, the DEQ and MDARD should develop, or arrange for the development of, templates for water audits and conservation plans. These instruments should be considered by the multi-interest group.	G6-6	G6-4	Incentivize and require outcome-based asset management planning for all public water utilities that includes more efficient use of resources.
WC 2.2d	The multi-interest workgroup should also be charged with developing a process for evaluating the results of the incentive-based system. This process should include metrics and data collection and evaluation methodologies. Ideally, metrics should be based on outcomes (e.g., volume of water conserved) rather than outputs (e.g., number of conservation practices adopted).		G6-5	Establish sustainable funding mechanisms to achieve the Water Strategy goals including water infrastructure management.

11. Next Meeting

September 15, 2020
On Teams

12. Open Comments

13. Next Meetings

- September 15, 2020
- October 20, 2020
- December 15, 2020

14. Motion to Adjourn
